



DEPARTMENT OF THE NAVY  
SOUTHWEST DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
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SAN DIEGO, CA 92132-5190

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NFD POINT MOLATE  
SSIC NO. 5090.3.A

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Ser 06CM.FA/313  
27 Apr 00

Ms. Linda Dorn  
Project Manager  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

Subject: RESPONSIVENESS SUMMARY FOR THE SITE 1 DRAFT ENGINEERING  
EVALUATION/COST ANALYSIS REPORT, NAVAL FUEL DEPOT POINT  
MOLATE

Dear Ms. Dorn:

Enclosed is the Responsiveness Summary for the Site 1 Draft Engineering Evaluation/Cost Analysis Report for NFD Point Molate. This document has also been provided to Mr. Kent Kitchingman of the City of Richmond. Resolution of these comments is planned for the Site 1 Working Meeting to be held at Point Molate on May 3, 2000 at 1:00 p.m. Please review and contact Ms. Michelle Gallice Sondrup at 619-562-0971 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Faiq Aljabi".

FAIQ ALJABI  
Environmental Baseline Team Leader  
By direction of the Commander

Enclosure: 1. Responsiveness Summary for the Draft Site 1 Engineering  
Evaluation/Cost Analysis (EE/CA), Naval Fuel Depot Point Molate

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Blind copy to: (w/encl)  
Mr. Kent Kitchingman, City of Richmond  
06CM  
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**RESPONSIVENESS SUMMARY  
FOR THE  
DRAFT SITE 1 ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)  
NAVAL FUEL DEPOT POINT MOLATE**

This document has been prepared in response to public comments that the Navy has received on the Draft Site 1 Engineering Evaluation and Cost Analysis (EE/CA) for Naval Fuel Depot (NFD) Point Molate, dated October 29, 1999. The Navy advertised the availability of this Draft EE/CA for review and comment in a public notice in the *West County Times* on February 16, 2000, and by a public mailing. The public comment period extended from February 16 through March 16, 2000. A public meeting was held on March 1, 2000.

This responsiveness summary is organized into two general sections. The first section contains responses to comments received from the restoration advisory board (RAB) technical document review committee (TDRC). The second section contains responses to comments received from the community during the public comment period.

**RESPONSE TO RESTORATION ADVISORY BOARD COMMENTS**

**GENERAL COMMENT**

**Comment 1:** This EE/CA provides several significant insights into the condition at Site 1 and the alternatives for addressing the problems associated with the contamination at that site. The TDRC does have a few concerns, however, and would like to see them reviewed and addressed before the Draft Final EE/CA is produced for their review.

Public participation in the decision making process is applauded and encouraged. On at least three occasions in this EE/CA there are references to placing a public notice in the *Richmond Post* to alert the public about the public meetings to be held to present and discuss the EE/CA. It's important to appreciate the efforts by the Navy to use small locally owned businesses but if the desire is to actually reach the majority of the community, then the *West County Times* is the source of information most widely read by the Pt. Molate Community. The *Post* is an Oakland based newspaper catering to a small crowd in Richmond and is rarely read by members of the surrounding communities that are a part of the Pt. Molate community but outside of Richmond proper.

In the past, the Navy has relied upon the good graces and benevolence of the local newspapers to run public notices on a gratis basis. Unfortunately, this practice leaves everything in the hands of the newspaper and makes absolutely no guarantees that the notice will even be placed. The newspaper has complete control over when the notice is run, the location and even the final content. To ensure that the Navy's notifications to the public are made in a responsible manner. It's imperative that paid announcements be placed in periodicals that will be read by the community. Any efforts otherwise can easily be erroneously perceived as an attempt to follow the letter

of the law while actually minimizing the Navy's participation in a partnership with the community.

These issues have been relayed to the Navy and their contractor, Tetra Tech, in personal conversations and also publicly at two RAB meetings. The TDRC is confident that the Navy will make the proper corrections before the public notifications are published, but there is a need to place these concerns in the permanent files and records for future review and consideration.

Furthermore, this report suggests that interested parties may have access to this report (and others like it) at the Richmond Public Library. Since this library is closed more than it's open, it should also be noted that access to these reports can be had by visiting the appropriate offices at Richmond City Hall (which is actually open during significantly different hours than the library). Between both repositories, the hours of public access is significant enough to allow the public the access they deserve.

**Response:** It is the Navy's intention to address the RAB's concerns about the Draft Site 1 EE/CA prior to issuing the next version of this report. The next version of the EE/CA will be a Working Final document; this version will be available June 21, 2000. The RAB and regulatory agencies will have the opportunity to review this document until June 30, 2000, and verify that the responses presented in this responsiveness summary are addressed. In order to address the RAB's concerns, this responsiveness summary was discussed with the TDRC at an April 4, 2000 meeting and at the April 6, 2000 RAB meeting.

The Navy appreciates the RAB's support in identifying the best means to reach the community and will keep these concerns in mind for future consideration. The public notice advertising the availability of the Draft EE/CA for public review and the March 1, 2000 public meeting appeared in the *West County Times* on February 16, 2000. The advertisement was a paid announcement; the Navy established the date it was published and the content.

The Final EE/CA will identify the location of the second information repository at Richmond City Hall.

## SPECIFIC COMMENTS

**Comment 1:** Section 1.0, Introduction. In the very first sentence of the introduction, Tetra Tech explains that after they summarize, present, and evaluate removal action alternatives, they will then make recommendations for a particular alternative. Unless they have been given specific guidelines beforehand as to what will serve the Navy, the City of Richmond and the members of the community, then perhaps it would be prudent to present the information in such a clear and concise manner that the evidence speaks for itself and the correct alternative is obvious and evident to all that read this report.

There is always a concern that the hired contractors will espouse that the desires of their employers and will even arrange the evidence to reinforce those desires. Since the appearance of propriety is just as important as the propriety itself, allowing the reader to formulate his own conclusions will help in recognizing this important public personification.

Furthermore, it's reported that, "as the lead agency, the Navy has final authority over the recommended alternative selected and over all other participation." This may be a true statement but the language used gives the reader the impression that the public, the City and all regulatory agencies actually have no input in the decision making process and, if the Navy should so desire, they can ignore all input and proceed in any manner they desire. Since the RAB is confident of the Navy's sincere desire to work as partners with the community, this verbiage should be amended to reflect the Navy's interest and concern for outside opinions before a determination is made.

**Response:** The Draft Site 1 EE/CA was prepared following guidance documents, policy, and regulations from the U.S. Environmental Protection Agency (EPA), Regional Water Quality Control Board (RWQCB), Navy, and the local enforcement agency. Part of the EE/CA process and purpose is to recommend (not select) a preferred alternative from those presented in the document, and then solicit comments from the regulatory agencies and the public. After all comments are received and addressed, the alternative selected is presented in the Action Memorandum. EPA's recommended format was used in preparing the Draft EE/CA, this format includes relevant information regarding cost, implementability, and effectiveness in protecting human health and the environment, and recommending a preferred alternative.

The language identified in this comment may leave the impression that the Navy is reluctant to receive regulatory and community input. The Navy is dedicated to partnering with the regulatory agencies and community. To better demonstrate this dedication, this language will be re-written and information will be added to describe the opportunities the Navy has provided to both the regulatory agencies and the community to provide input on the selection of the removal action alternative at Site 1. This added language will include a description of the public notice, mailing, and comment period, as well as the opportunity provided to the regulatory agencies to review and comment on the document.

**Comment 2:** Section 2.1.2. It's reported that no garbage was found on Site 1. Since the Navy so readily deposited the facility's trash at Site 1 for more than 22 years, it leads to query about why the Navy would treat their garbage in a different manner. Because no garbage was actually found in the limited excavations at Site 1, this should not be considered conclusive evidence that garbage was not dumped there as well. The EE/CA should address the question about the facility's garbage by determining what means the Navy had for collecting the garbage and removing it from the site.

**Response:** The term "Garbage" refers to household wastes, in particular food wastes. During the field work and document search for the Site 1 EE/CA, no evidence was found that garbage was ever disposed of in the Site 1 landfill. In addition, no garbage was found during trenching activities performed at Site 1. Also, personnel interviews conducted during the environmental baseline survey (EBS) indicated that only construction debris and oily waste were disposed of at Site 1. This will be clarified in the Final EE/CA.

**Comment 3:** Section 2.5.2. The bottom of paragraph 3 addresses the unexpected finding of vinyl chloride at Site 1. Even though it was unexpected and of low concentrations, the origin of this unexpected finding was not addressed. Where did the vinyl chloride come from and will it affect the cleanup efforts?

Based on the Draft Phase II RI, closure by “presumptive remedy” of IR Site 1 is depending on showing that the petroleum hydrocarbon saturated materials which constitute about 30 to 40% of the fill will not migrate down gradient to an extent which will cause a problem, e.g. contamination of the intertidal zone or hazards for shoreline regional users or people in residence. The major concerns seem to be:

mobility of the JP-5 and diesel fuel contamination found  
hydrocarbon sheens observed in the downgradient storm drain outfall feeding directly into the Bay (page 4-8).

Especially significant are the lenses of fuel which may constitute up to 40% of the fill (page 8-1).

The text in this section of the Draft EE/CA is not very helpful in judging the extent of contamination attenuation in groundwater or surface seep water. It would be very useful if graphs were presented showing attenuation of contaminant concentrations versus sampling data at each sampling site. Some graphs of this type were presented in the Draft Phase II RI, e.g., Figures 4-27, 28, & 29.

**Response:** Section 2.5.2 of the Draft EE/CA indicates that the detection of vinyl chloride is not considered representative of groundwater contamination. That is, this detection is likely a sampling or laboratory artifact. These types of false positives are common, although not frequent. Future groundwater monitoring will be conducted to confirm that these detections are truly false positives. These results will be included in the next version of the EE/CA.

Groundwater monitoring is part of all the alternatives, including the recommended alternative. This monitoring will be used to evaluate contaminants migrating from the landfill to downgradient areas. The major concerns referenced in this comment are primarily a result of leaks and spills from the underground storage tank (UST) system, which are being addressed under the UST program.

The intent of the EE/CA is to provide a brief summary of the extent of contamination, whereas the remedial investigation (RI) report provides a more comprehensive description. Attenuation of contaminants in well MW02-06 will be graphed and presented in the Final EE/CA. This well has been selected because it is within the waste and presents the most contaminated groundwater conditions at the site (worst-case scenario).

**Comment 4:** Section 2.5.4. Any methane gas generated at Site 1 will have a significant impact on the remediation determination so why were no surveys conducted to detect methane gas before the Draft EE/CA was offered up for public review? This is no different than surveying for TPH [total petroleum hydrocarbons] or heavy metals.

**Response:** A methane survey was conducted at Site 1 in January 2000. This survey included driving two gas probes into the waste and collecting soil gas samples, collecting a surface sweep gas sample, and using a field screening instrument to monitor existing groundwater monitoring wells. No methane was detected in the gas probe samples or surface sweep sample. However, methane was detected in an existing monitoring well (well MW02-06); the methane concentration was measured at 21.6 percent at this location within the waste. The results of this survey will be presented in the next

version of the EE/CA. Based on these results, the Navy will include methane venting and perimeter methane monitoring with the preferred alternative.

**Comment 5:** Section 3.4.2. It is not apparent why the Coastal Zone Management Act (CZMA) is considered to be a potential ARAR [applicable or relevant and appropriate requirement]. Please explain.

**Response:** NFD Point Molate is within the coastal zone, but Site 1 is not. Because of this proximity to the zone, identifying the CZMA as a potential ARAR was a conservative measure. The CZMA will not be included as an ARAR in the Final EE/CA.

**Comment 6:** Section 4.0. The actual time frame for the duration of post-closure monitoring has not been determined. What is the basis for selecting a 30-year time frame and will this also include maintenance as well as monitoring?

**Response:** Requirements in Title 27 of the California Code of Regulations (Section 21180) require that landfills be maintained and monitored for a period of not less than 30 years; this regulation does not apply to groundwater monitoring. This is the basis of the maintenance and inspection period. The period for groundwater monitoring will be evaluated in the post-closure groundwater monitoring plan.

**Comment 7:** Section 4.2. The feasibility of Alternatives 2 & 3 (Section 4.3) may be jeopardized by settlement of the site. The Draft Phase II RI states on page 8-3:

“The fill was not fully compacted and contains voids and will probably experience some subsidence or piping in the future. If settlement occurred following cap emplacement, it would cause additional maintenance.”

One foot of cover soil as proposed in Alternatives 2 & 3 probably will be inadequate since the roots of native grasses and other native plants tend to go very deep and may penetrate the underlying low-permeability layer.

**Response:** Prior to construction of the cover, the fill can be “proof rolled” to prevent future subsidence. Proof rolling consists of compacting the existing fill with a large sheep-foot roller and compactor. In addition, future inspection is intended to detect any subsidence. If subsidence is identified, maintenance would include placing clean fill to match existing grades.

Alternative 2 assumes a 3-foot soil cover with no low-permeability layer and does not require measures to prevent root penetration. Alternative 3 includes a low-permeability layer, and costs were included (Appendix B) for a geotextile layer to separate the low-permeability and vegetative layers. This geotextile layer would reduce penetration of roots into the low-permeability layer. The Final EE/CA will include a description of the geotextile layer in the text.

**Comment 8:** Section 4.2.1 (page 18-19). The surface drainage controls are mentioned here but there is no mention of maintenance other than periodic inspection. Who will be responsible for the land use inspections and for how long?

The revegetation plan should be planned carefully using both seeds and plants which are native to the Potrero Hills. This should be regarded as an opportunity for a

showcase project to demonstrate restoration of the site using appropriate perennial native grasses, forbs, and shrubs. Weed control will be essential to eliminate opportunistic alien plants (weeds) which tend to flourish and dominate in disturbed soil. Mr. Paul Kephart, Restoration Ecologist, could advise on design and conduct of a site restoration program (telephone: 831.659.3820).

**Response:** A description of maintenance for surface drainage controls will be included in the alternative summary in Section 4.2.1. The Contra Costa Health Services is the local enforcement agency responsible for conducting annual inspections. The time frame for these inspections has not been established.

The Navy will use native plants for revegetation; the specification for reseeding will be included in the engineering design. The Navy appreciates the RAB's reference for assistance with the revegetation.

**Comment 9:** Section 4.2.2. Since Reuse Plans call for IR Site 1 to be used as open space, the preferred alternative of this EE/CA (Alternative 2) may very well prevent direct physical contact of receptors within the confines of this site. What about the exposure to receptors downgradient where more intensive future uses are to be expected? As long as Alternative 2 proposes the use of a permeable soil cap, what are the assurances that groundwater won't soak through this cap and flow downgradient to the receptors in the developed lands?

The mitigation in Alternative 2 for this toxics transport is to construct a drain system to convey surface water over the soil covering the toxics. However, given the flow of groundwater from the hillsides above and the path of rainwater into the permeable soil of the proposed cover, the volume of groundwater flowing through the site will be substantial and this may very well mobilize a large fraction of the site's toxics.

Unfortunately, even if the soil used to make this 3 foot cover were impermeable, it still would not suffice. As pointed out in Alternative 3, the clay layer has to be constructed in an exacting way, to isolate the toxics from groundwater flow.

**Response:** Groundwater monitoring programs are included as part of Alternatives 2 and 3 to evaluate potential exposure of downgradient receptors as site use changes. Residential exposure to groundwater is unlikely because of the availability of municipal water supply and the unreliable nature of the shallow groundwater supply in the area. Other potential exposure pathways, such as to recreational site users to surface water, will be monitored. Because groundwater will remain present beneath a low permeability cap as a result of groundwater currently saturating the waste and future infiltration of groundwater from the sides and beneath the waste, similar concerns would also exist with Alternative 3. In addition, the UST program will evaluate groundwater cleanup in areas downgradient of Site 1 in the corrective action plan.

**Comment 10:** Section 4.3. Maintenance of a clay cap calls for mowing the vegetation on top of it to prevent deep roots from taking hold. Is this accounted for? Is this the Navy's responsibility or will the cost have to be borne by the City? How long will this ground cover maintenance be required.

**Response:** Mowing is included in the description of maintenance for Alternative 3. In the event of property transfer to the City of Richmond, maintenance costs would be negotiated

with the Navy. The assumed maintenance period would be 30 years; however, annual inspections may indicate that this sort of maintenance may not be necessary every year.

**Comment 11:** Section 4.3.3. The RAB has suggested the consideration of bay mud that might be available locally and at a lower cost than that proposed. This should be investigated, considered and addressed.

Since cost is always the riding factor when the Navy selects alternatives for remediation, the Navy should research the availability of clay for alternatives 3A and 3B to determine if the clay is available closer to the site (e.g., bay mud or the Fairfield landfill). Should the clay be available closer to the site, the delivery costs might be slashed dramatically and this might allow these options to fit more closely into the Navy's selection criteria.

**Response:** The availability of earthen (soil and clay) materials varies over time and often depends on other local excavation or dredging projects. In addition, the clay for Alternative 3 will be required to meet certain specifications (that is, a permeability requirement). If Alternative 3 were implemented, the most local source would be used. However, it is difficult to predict the availability of these materials in the future, and the estimate of the implementability and cost of Alternative 3 is based on current information. In preparing the Final EE/CA, availability of a local clay source will continue to be evaluated.

Alternative 3B includes a geosynthetic clay liner (GCL), which is a readily available, manufactured liner. The GCL was considered for a low-permeability alternative to the clay layer to eliminate uncertainties in obtaining a low-permeability material and to be more cost effective.

**Final Comment:** The TDRC does not agree with Tetra Tech that Alternative 2 is the best of the five alternatives. Alternative 1 has been removed from consideration and Alternative 4, without mitigation that would require this extreme and costly measure, is also removed from serious consideration. Of the three alternatives remaining (a soil cap and two variations of a clay cap) there appear to be serious reasons to reject the use of a soil cap (Alternative 2). Alternative 2's permeability is the strongest reason for consideration of the impermeable options available in Alternatives 3A and 3B. There simply is too great a risk that tainted groundwater and water from the water table may mobilize a flow of toxics into areas outside of Site 1. The difference in the cost between Alternatives 2 and 3 should not be the deciding factor in making this selection.

Because of the number of concerns over this EE/CA and the failure to include pertinent data, the TDRC of the RAB would like to be a part of the review process for the Draft Final EE/CA to be sure that their concerns are adequately addressed.

**Response:** Although Alternative 2 would allow infiltration of some surface water into the waste, surface water from the surrounding hillsides would be captured in drainage ways and prevented from infiltrating into the waste. In addition, grading of the cover will enhance run-off of precipitation and the vegetative layer will enhance evapotranspiration and minimize infiltration through root uptake of water. These actions will significantly reduce groundwater migration from the landfill.

Neither Alternative 2 or 3 will completely eliminate groundwater migration. Therefore, groundwater monitoring programs are included as part of Alternatives 2 and 3 to evaluate potential exposure of downgradient receptors as site use changes. Residential exposure to groundwater is unlikely because of the availability of municipal water supply and the unreliable nature of the shallow groundwater supply in the area. Other potential exposure pathways, such as to recreational site users to surface water, will be monitored. Because groundwater will remain present beneath a low permeability cap, similar concerns would also exist with Alternative 3. Therefore, there is no added benefit over Alternative 2 with Alternative 3, and with Alternative 3 there are concerns associated with implementability and additional cost.

Groundwater downgradient of the landfill is contaminated primarily as a result of releases from the UST system. The UST program will evaluate groundwater cleanup in areas downgradient of Site 1 in the corrective action plan.

It is the Navy's intention to address the RAB's concerns about the Draft Site 1 EE/CA prior to issuing the next version of this report. The next version of the EE/CA will be a Working Final document; this version will be available June 21, 2000. The RAB and regulatory agencies will have the opportunity to review this document until June 30, 2000, and verify that the responses presented in this responsiveness summary are addressed. In order to address the RAB's concerns, this responsiveness summary was discussed with the TDRC at an April 4, 2000 meeting and at the April 6, 2000 RAB meeting.

#### **Comments from Stephen Linsley:**

The preferred alternative of this document, Alternative 2 (a 3-foot soil cover) may prevent direct contact of receptors physically at IR Site 1. As this document pointed out, future plans call for IR Site 1 to be open space. What I am worried about is exposure to receptors downhill, where more intensive future uses are to be expected. My concern about Alternative 2 is that it is permeable to groundwater, and groundwater is capable of transporting the site's toxics downhill to these receptors.

The mitigation in Alternative 2 for this toxics transport is to construct a drain system to convey surface water over the soil covering the toxics. However, given the flow of groundwater from the hillsides above and the path of rainwater into the permeable soil of the proposed cover, there will still be a lot of groundwater flow through the site, which can eventually mobilize a large fraction of the site's toxics.

Unfortunately, even if the soil used to make this 3 foot cover were impermeable, it would still not suffice. As pointed out in Alternative 3, the clay layer has to be constructed in an exacting way, to isolate the toxics from groundwater flow. That is what is needed, an impermeable clay cap, as in Alternative 3A. Assuming a round trip of 50 instead of 100 miles, the cost for obtaining the clay from Fairfield's landfill will not be as high as the estimates for this alternative in the document.

#### **Response:**

Groundwater monitoring programs are included as part of Alternatives 2 and 3 to evaluate potential exposure of downgradient receptors as site use changes. Residential exposure to groundwater is unlikely because of the availability of municipal water supply and the unreliable nature of the shallow groundwater supply in the area. Other potential exposure pathways, such as to recreational site users to surface water, will be

monitored. Because groundwater will remain present beneath a low permeability cap as a result of groundwater currently saturating the waste and future infiltration of groundwater from the sides and beneath the waste, similar concerns would also exist with Alternative 3. In addition, the UST program will evaluate groundwater cleanup in areas downgradient of Site 1 in the corrective action plan.

The availability of earthen (soil and clay) materials varies over time and often depends on other local excavation or dredging projects. In addition, the clay for Alternative 3 will be required to meet certain specifications (that is, a permeability requirement). If Alternative 3 were implemented, the most local source would be used. However, it is difficult to predict the availability of these materials in the future, and the estimate of the implementability and cost of Alternative 3 is based on current information. In preparing the Final EE/CA, availability of a local clay source will continue to be evaluated.

### **RESPONSE TO OTHER PUBLIC COMMENTS**

#### **Comment from E. Durbin:**

The proposed cleanup should have a requirement not to build up a high mound that becomes an eyesore. The cover, containment walls should be no higher than ground level. See the mound and mesa in Point Richmond Brickyard Cove to see what you should avoid.

**Response:** This comment will be considered during design of the landfill cover. The recommended 3-foot soil cover will be higher in some places to allow for surface water drainage, but will be graded to match the surrounding land slopes.

#### **Comment from West Contra Costa County Group of the Sierra Club:**

The West Contra Costa Group of the Sierra Club supports the attached comments of the Point Molate Restoration Advisory Board to the Draft Site 1 EE/CA.

The West County Group is very interested in the proper cleanup of Point Molate. We agree with the concerns mentioned in the RAB comments. These issues are very important and should be addressed. We would also like to be part of the review process for the Draft Final EE/CA.

**Response:** Please find the responses to the RAB comments above. It is the Navy's intention to address the RAB's concerns about the Draft Site 1 EE/CA prior to issuing the next version of this report. The next version of the EE/CA will be a Working Final document; this version will be available June 21, 2000. The RAB and regulatory agencies will have the opportunity to review this document until June 30, 2000, and verify that the responses presented in this responsiveness summary are addressed. In order to address the RAB's concerns, this responsiveness summary was discussed with the TDRRC at an April 4, 2000 meeting and at the April 6, 2000 RAB meeting.